RCA AMATEUR RADIO CLUB

Legacy Amateur Radio Club

AFFILIATED CLUB

INDIANAPOLIS, INDIANA

DECEMBER 2017 MONTHLY NEWSLETTER

THE NEXT MEETING OF THE RCA AMATEUR RADIO CLUB WILL BE
TUESDAY, DECEMBER 12th, 6:30 PM AT
SQUEALERS, 5899 E. 86th STREET, INDIANAPOLIS, IN
The meeting room in the back has been reserved for us.

Merry Christmas and Happy Holidays

RCA ARC NEWS

SUMMARY OF THE NOVEMBER MEETING – Thanks to all who attended the November meeting at the new location. We will meet at the same location next month (December). Jim, AF9A, reported the '88 repeater has been operating normally. We have some work to do at the site which involves finishing the consolidation of the repeater from two racks to one rack. (The second rack was temporary when we first installed the Yaseu Fusion repeater. It's been two years, guess we're going to keep it!) The 6 meter beacon is ready to be re-installed with a new antenna and fixed key clicks. The Indiana Repeater Council met at the Ft. Wayne Hamfest. Our Club will pay our dues. Club insurance is due and will be paid. The Field Day results have been published. N9NS, the FD call used this year by the combined RCA / IRC Field Day group finished 6th nationally in the 3A category. Congratulations to all who helped in the effort! There is an upcoming FMT (Frequency Measuring Test) as well as the ARRL SweepStakes and 10 Meter contests. It was pointed out that Jim, K9RU, recently gave a FT8 demonstration at the Indidnapolis Radio Club meeting.

W9RCA 6 Meter beacon is back on the air – John Garino, KF9UH and Jim Rinehart, K9RU installed the 6M beacon transmitter and a Ringo 6 meter vertical last weekend at the site on the west side of Indianapolis.

The antenna is at 100 feet, the beacon is running 8W and the frequency is: 50.069 MHz.

It has been off the air since last spring after a storm destroyed the 6M dipole antenna. The transmitter also had some CW key clicks that were corrected. - K9RU

AMATEUR RADIO LICENSE TEST SESSION

Time: Saturday, Dec. 16, 2017, 12:00 pm (Walk-ins allowed)
Location: Salvation Army EDS Training Facility, 4020 Georgetown Rd, Indianapolis, IN
Contact: Jim Rinehart, k9ru@arrl.net, 317 721-1458

HAMFESTS, OPERATING EVENTS, VOLUNTEER OPPORTUNITIES

Dec 9-10	ARRL 10M Contest http://www.arrl.org/10-meter
Dec 17	Rookie Roundup – CW
Jan 1	Straight Key Night
Jan 6	Kids Day
Jan 6-7	RTTY Roundup

Jan 20-22 ARRL January VHF Contest
Opportunities for public service: http://indyhams.org/event

ANNOUNCING: THE ARRL INTERNATIONAL GRID CHASE

A new and exciting operating event will kick off on January 1, 2018, at 0000 UTC (New Year's Eve in US time zones), when the ARRL International Grid Chase gets under way. The year-long event hopes to build on the success of the highly successful 2016 National Parks on the Air (NPOTA). The objective is to work stations on *any* band (*except*60 meters) in as many different Maidenhead grid squares as possible, and then upload your log data to ARRL's Logbook of The World (LoTW). Registration in LoTW is free, and it costs nothing to participate

Many hams are familiar with grid squares from the VHF/UHF and satellite realms, and everyone lives in one. ARRL's VUCC is based on grid squares, and some contests on HF, VHF, and UHF also use them as a scoring factor.

The Maidenhead grid square system divvies up the entire globe into 324 fields, each containing 100 grid squares 1° latitude × 2° longitude in size. With 32,400 potential grid squares, it's not likely that anyone will run out of challenges, even though some grid squares are surrounded entirely by water or are in areas that are uninhabited or difficult to access.

If you don't know your grid square, David Levine, K2DSL, has an online calculator. Just enter a postal address, ZIP code, or even a call sign, and his site will tell you the grid square for that location. For example, enter "W1AW" and the site will return "FN31pr." For the purposes of the ARRL International Grid Chase, though, just the two initial letters and the two numbers that follow (e.g., FN31) are all you'll need to know.

Once you get active in the chase and start uploading your log data, each new grid square contact confirmed through LoTW will count toward your monthly total. Getting started is simple. Turn on the radio and just call CQ or "CQ Grid Chase" or listen for others doing the same. Make a contact, exchange grid squares, log it, and move on to another. At the end of each month, your totals on the Grid Chase leader board will reset to zero, although the system retains these to determine top finishers in various categories at the end of the year.

Any contact you make in 2018 can count toward your Chase score; it doesn't have to involve an exchange of grid squares. As long as the other operators also participate in LoTW, you'll get credit automatically when they upload their logs. This means that contest contacts also count, as will contacts with special event stations or other on-air activity that uses LoTW to confirm contacts.

Some radio amateurs live in sparsely populated grid squares, and if you're one of those, you could find yourself handling a pileup! Expeditions to hard-to-reach or rare grid squares undoubtedly will evolve. You also can travel to one of those grid squares yourself. Some vehicle or handheld GPS units can be set to display when you are in a particular grid square. Apps are available for smartphones or tablets, such as *Ham Square* for iOS devices or *HamGPS* for Android devices.

There are no restrictions on modes or bands, as long as they are legal. Satellite contacts are valid for the Chase. The event is open to all radio amateurs.

Full details of the ARRL International Grid Chase appear in the December 2017 issue of *QST*.

For more information, contact the ARRL Contest Branch. Read more. –ARRL

FCC SEEKS COMMENTS ON TECHNOLOGICAL ADVISORY COUNCIL RECOMMENDATIONS

In a Public Notice released on December 1, the FCC's Office of Engineering and Technology (OET) has invited comments by January 31, 2018, on a wide-ranging series of Technological Advisory Council (TAC) recommendations that, if implemented, could alter the spectrum policy regulatory landscape — especially with respect to interference resolution and enforcement. An

advisory body, the TAC's membership includes several Amateur Radio licensees. ARRL will file comments in the proceeding, ET Docket 17-340.

The TAC has called on the FCC to:

Consider adopting the spectrum management principles spelled out in the Council's Basic Spectrum Principles white papers of March 2014 and December 2015, and "set clear expectations about the affected system's capabilities regarding interference, such as harm claim thresholds."

More broadly adopt risk-informed interference assessment and statistical service rules. "In judging whether to allow new radio service rules, the TAC observes that the Commission has to balance the interests of incumbents, new entrants, and the public," the Public Notice explained. "The process of analyzing the tradeoffs between the benefits of a new service and the risks to incumbents has, to date, been essentially qualitative."

Implement "a next-generation architecture" to resolve interference, and establish a public database of past radio-related enforcement activities. The TAC also recommended that the FCC "incorporate interference hunters in the [interference] resolution process."

The TAC spelled out a set of three "Interference Realities," which, in part, assert that harmful interference "is affected by the characteristics of both a transmitting service and a nearby receiving service in frequency, space, or time," and that radio services should expect occasional service degradation or interruption."

The TAC also posed three "Responsibilities of [Radio] Services that, in part, state that "receivers are responsible for mitigating interference outside their assigned channels" and that "transmitters are responsible for minimizing the amount of their transmitted energy that appears outside their assigned frequencies and licensed areas." The TAC acknowledged that the FCC, by and large, does not regulate receiving systems.

Another three principles under "Regulatory Requirements and Actions" the TAC suggested that the FCC may "apply interference limits to quantify rights of protection from harmful interference." According to the Public Notice, the TAC "has recommended interference limits as a method for the Commission to communicate the limits of protection to which systems are entitled, without mandating receiver performance specifications." The TAC called for a "quantitative analysis of interactions between services" before the FCC could "make decisions regarding levels of protection," The OET said.

"[T]he TAC believes the principles can be applied to all systems and result in an optimal solution for each service," the Public Notice said. The TAC has suggested that the FCC not base its rules on exceptional events and worst-case scenarios but on reality.

"The TAC recommends that the Commission start soon, and start small, and not attempt a major overhaul of its regulatory approach," the Public Notice said.

AO-91 COMMISSIONED, DECLARED OPEN FOR AMATEUR USE!

AMSAT-NA's latest Amateur Radio CubeSat, RadFxSat (Fox-1B), now known as AO-91, has been opened for general use. AMSAT Engineering officially announced that AO-91 was ready for use at 0650 UTC on Thanksgiving Day, November 23. AMSAT VP of Engineering, Jerry Buxton, N0JY, turned over operation to Mark Hammond, N8MH, and AMSAT Operations during a contact on the AO-91 repeater during the pass over the Eastern US, AMSAT said in a bulletin.

The latest CubeSat in the Fox series was launched on November 18 from Vandenberg Air Force Base in California. Telemetry is downlinked via the DUV sub-audible telemetry stream, which can be decoded using FoxTelem software.

A 1U CubeSat, RadFxSat (Fox-1B) is a joint mission of AMSAT and the Institute for Space and Defense Electronics (ISDE) at Vanderbilt University. AMSAT constructed the rest of the satellite, including the spaceframe, on-board computer, and power system. The Amateur Radio package is similar to that currently on orbit on AO-85, with an uplink on 435.250 MHz (67.0 Hz CTCSS)

and a downlink on 145.960 MHz. -- *Thanks to AMSAT News Service*

AMATEUR RADIO-CARRYING D-STAR ONE CUBESAT AMONG SPACECRAFT APPARENTLY LOST

The first Amateur Radio satellite to employ the D-Star digital voice and data format -- D-Star One -- was among about 20 secondary payloads lost on November 28 after an otherwise nominal launch of a three-stage *Soyuz* 2.1 booster from the new Vostochny Cosmodrome in the far reaches of eastern Russia.

The mission carried the Russian *Meteor* M2-1 satellite -- the primary payload -- as well as a Canadian *Telestar* experimental satellite, and 17 other secondary payloads, including D-Star One. According to reports, a fault occurred in the sophisticated and autonomous *Fregat* upper stage, which, after separating from the launch vehicle, inserts multiple spacecraft into their respective orbits. A so-called "space tug," *Fregat* has been in service for nearly 2 decades and has suffered three previous failures. Russian space agency Roscosmos is investigating the *Fregat* failure.

D-Star One, the first German commercial CubeSat, carried four communication modules, two designated for Amateur Radio use.

"Hopefully, we'll get another chance to utilize D-Star communications with a satellite repeater sometime in the future," Wayne Day, N5WD, commented on the AMSAT-BB.

The *Fregat* upper stage functions as an orbital vehicle in its own right to access a range of orbital configurations through a series of "burns." Made up of six spherical tanks arrayed in a circle, *Fregat* is "independent from the lower three stages, having its own guidance, navigation, control, tracking, and telemetry systems," according to Gunter's Space Page.

The November 28 launch was only the second from the new cosmodrome. --ARRL Letter

THE YASME FOUNDATION ANNOUNCES THE YASME EXCELLENCE AWARDS FOR 2017

The Yasme Excellence Award is presented to individuals and groups who, through their own service, creativity, effort and dedication, have made a significant contribution to amateur radio. The contribution may be in recognition of technical, operating or organizational achievement..." The latest recipients include:

- The Dayton Amateur Radio Association upon their successful move of the storied Hamvention to a new location with little notice
- Paul Verhage, KD4STH and Bill Brown, WB8ELK for their continued leadership and innovation in the area of Amateur Radio high altitude ballooning.
- Nathaniel Frissell, W2NAF and Magda Moses, KM4EGE for creating and leading HamSCI, an organization devoted to the pursuit of science through Ham Radio, and for their Solar Eclipse QSO Party
- The WSJT Development Team, who invented the new weak signal modes like FT8 and develop supporting software
- Dale Hughes, VK1DSH, for his work on 60 meter Amateur allocations during the ITU's 2015 World Radiocommunication Conference.

The Yasme foundation also provided a grant to Gary Pearce, KN4AQ, for his "production and distribution of videos of interest to the amateur radio community through Ham Radio Now and YouTube." --ARRL Contest Update

YEAR-LONG NASA ON THE AIR EVENT KICKS OFF ON DECEMBER 11

The Amateur Radio clubs at National Aeronautics and Space Administration (NASA) centers

around the US have invited the Amateur Radio community to join the NASA On The Air (NOTA) special event. NOTA gets under way in December and continues through December 2018. In addition to being the agency's 60th anniversary, 2018 will mark 50 years since NASA orbited the first human around the moon, and 20 years since the first elements of the International Space Station (ISS) were launched into low-Earth orbit.

Starting on Monday, December 11, 2017, Amateur Radio club stations at various NASA centers and facilities will be on the air with special event operations to celebrate these monumental achievements, as well as current milestones. Some clubs will offer commemorative QSL cards, and a special certificate will be available indicating the number of NASA club stations worked on various bands and modes.

"We plan to have a web-based system for you to check your points total and download a printable certificate at the end of the event in December 2018," the NASA announcement said. "Points will be awarded for each center worked on each band and mode (phone, CW, digital, and 'space' modes -- satellites, meteor scatter, EME, ISS APRS)." That would, of course, include contacts with any of the Amateur Radio stations on the ISS.

Key anniversaries during NOTA include the 45th anniversary of Apollo 17 on December 11, 2017, which kicks off the event; NASA's founding on July 29, 1958; the 20th anniversary of the ISS first element launch on November 20, 1998; the 20th anniversary of the ISS Node 1 Launch on December 4, 1998, and the 50th anniversary of Apollo 8 -- launched on December 21, 1968, and returned on December 27 -- marking the end of the event.

More information is on the NASA On The Air website. Participating Amateur Radio clubs and the NOTA event are independent of -- and not officially sponsored by -- NASA. Read more. -- *Thanks to Rob Suggs, KB5EZ, NASA Marshall Space Flight Center Amateur Radio Club (NN4SA), and Kevin Zari, KK4YEL, NASA Kennedy Space Center Amateur Radio Club (N1KSC).*

MAJOR NEW EDITION OF THE ARRL HANDBOOK IS NOW AVAILABLE!

The 2018 edition of *The ARRL Handbook for Radio Communications* has undergone a complete makeover and is now available. First published in 1926, the most widely used one-stop reference and guide to radio technology principles and practices over the years since has documented the state-of-the-art in Amateur Radio as well as emerging technologies in radio experimentation, discovery, and achievement. The 95th edition of *The Handbook* has been extensively updated, and includes significant new content. Each chapter has been authored and edited by experts in the subject. ARRL CEO Tom Gallagher, NY2RF, is promoting *The Handbook* as a valuable resource for new and veteran hams alike.

"For new hams, you will be amazed at how quickly you become familiar, not only with the theory, but also with the practical aspects of radio -- from long waves to microwaves," he said. "For experienced hams, you're in for a surprise and delight when you see the extent of the latest revisions. This edition is the most comprehensive revision since the 2014 edition."

Readers can download a fully searchable, digital edition of the *Handbook*, plus expanded supplemental content, software, PC board templates, and other support files.

The Handbook is not just for radio amateurs. For years now, it's proved to be a valuable resource for professionals and students in radio and communication technology, electrical engineering, data communication, physics, and geophysics.

New projects in the 2018 edition include VHF/UHF/Microwave Filters and Transmission Lines; Software-Controlled and Manual Preselectors for 1.8-30 MHz; Digital Mode Audio-Based VOX/PTT Interface; PICAXE-Based Timer; 6-Meter Halo Antenna; Big Wheel VHF/UHF Mobile Antenna, and an Off-Center End-Fed Portable 40-6 Meter Antenna.

Readers of the 2018 edition of *The Handbook* will also find new and updated information on software-defined radio (SDR) and digital signal processing (DSP), grounding and bonding, Solar Cycle 24-25, tower safety, and remote-control station building.

The ARRL Handbook is available in hardcover and softcover editions from the ARRL Store or your ARRL Dealer. Hardcover: ARRL Order No. 0727, ISBN 978-1-62595-072-7, $59.95 retail. Softcover: ARRL Order No. 0710, ISBN 978-1-62595-071-0, $49.95 retail. Call (860) 594-0355 or, toll-free in the US, (888) 277-5289.

ULRICH ROHDE, N1UL, RECEIVES WIRELESS INNOVATION FORUM LEADERSHIP AWARD

The oft-honored Ulrich Rohde, N1UL, is the recipient of the Wireless Innovation Forum Leadership Award (formerly International Achievement Award). The award recognizes "especially significant contributions in furthering the global mission of the Wireless Innovation Forum." A prolific technical author, academic, and engineer, Rohde is a partner of Rohde & Schwarz in Munich, Germany, and chairman of Synergy Microwave Corporation, in Paterson, New Jersey.

While working under an **RCA** US Department of Defense contract in 1982, Rohde's department developed the first software-defined radio (SDR), which used the COSMAC (complementary symmetry monolithic array computer) chip. Rohde was among the first to present publicly on this topic with his 1985 talk, "Digital HF Radio: A Sampling of Techniques," at the Third International Conference on HF Communication Systems and Techniques in London.

"Since then, Rohde has actively driven innovation in the field of SDR, both in industry and academia," the Award announcement said. Rohde holds some 50 patents. In December 2016, Rohde was invited to deliver the Sir J.C. Bose Memorial Lecture on "Next-Generation Networks: Software-Defined Radio -- Emerging Trends," at IEEE Hyderabad, India. In the 2017 edition of *Communications Receivers*, Rohde and his co-authors set SDR at the core of modern communications systems design.

A project in which Rohde & Schwarz is involved was also honored. The Wireless Innovation Forum conferred its Technology of the Year award on the German Armed Forces Joint Composite Radio Equipment Project; Rohde & Schwarz is lead industry partner.

Winners were announced at the Wireless Innovation Forum Conference on Communications Technologies and Software-Defined Radio (WInnComm 2017), held in San Diego November 15-17. --ARRL Letter

WORLD WIDE RADIO OPERATORS FOUNDATION ANNOUNCES KP4 GENERATOR PROJECT

The World Wide Radio Operators Foundation (WWROF) has announced a program to help radio amateurs and radiosport enthusiasts in Puerto Rico get back on the air in the wake of this fall's devastating hurricane damage to the island. The KP4 Generator Project is raising funds to purchase Honda eu2000i generators for the radio amateurs of Puerto Rico. Well-known contester Angel Vazquez, WP3R, will distribute these generators to active radio amateurs on the island for use in emergency-related communication and other applications, based on local need.

The WWROF will match the first $5,000 in donations from clubs and individuals to the KP4 Generator Project. WWROF is an IRS 501(c)(3) organization, and donations are tax-deductible for US taxpayers to the extent allowed by law.

Puerto Rico suffered extreme damage from hurricanes Irma and Maria, and while recovery efforts are proceeding, a lot of work remains to be done that will take significant time, WWROF Chairman, John Dorr, K1AR, said in an announcement over the weekend.

"Amateur Radio has filled a vital need for communications, since the storm destroyed most of the island's wired and wireless infrastructure," Dorr noted. "Many of our fellow Amateur Radio operators and contesters are among the people who suffered significant damage." The

WWROF said the contesting community in Puerto Rico has expressed a continued need for generators to stay on the air and to power their homes for ongoing communication needs.

Currently electric power has been restored to roughly two-thirds of the island, but full power may not be back until early next year, according to some estimates. Generators remain in high demand and in very short supply on the island.

The Amateur Radio and Radiosport communities may donate to the KP4 Generator Project via PayPal (to donations@WWROF.org), via credit card on the WWROF website (click on the DONATE button), by check to WWROF, PO Box 529, Fredericksburg, TX 78624-0529.

The mission of the Worldwide Radio Operators Foundation is to improve the skills of Amateur Radio operators around the world, utilizing education, competition, advancement of technology and scientific research. The foundation focuses on promoting international friendship and goodwill, and on preparing operators to better serve society in times when communication support is needed.

SHORT

Status Report: **The Amateur Radio Parity Act of 2017** - The Amateur Radio Parity Act of 2017 - S. 1534 is alive, but with legislative action slowed to a glacial pace on Capitol Hill in recent months, there's been no real progress to report since this past summer. At present, the bill is under consideration by the US Senate Committee on Commerce, Science, and Transportation, and it remains an active concern for ARRL. The League is working diligently to shake the bill loose and move it forward.

While it may appear that time is short, S. 1534 does not need to pass the Senate by year's end. The bill remains in play until the current session of Congress adjourns, which doesn't happen until December 31, 2018. Once the bill has been passed by both chambers, the FCC would still have to implement its essence in the Part 97 Amateur Service rules.

FCC Dismisses Radio Amateur's Petition to Revise Call Sign Rules - The FCC has dismissed a rule-making petition filed last May by Thomas J. Alessi, K1TA, of Stamford, Connecticut, that sought to amend the Part 97 rules regarding Amateur Radio Service call signs. The Commission action came in a November 28 letter from Scot Stone, Deputy Chief of the FCC Wireless Telecommunications Bureau Mobility Division. Alessi had asked the FCC to make call signs consisting of one letter, followed by two digits, followed by one letter (1 ×× 1 format) available to Amateur Extra-class licensees. Alessi asserted that the number of Amateur Extra-class licensees who desire short call signs exceeds the available supply of 1 × 2 and 2 × 1 call signs, and that his plan would make available an additional 7,800 four-character call signs. --ARRL Letter

Day 1 with the ICOM IC-7610 Fred Lloyd, AA7BQ and Steve Gross, W7SCG give us a first look of the IC-7610 on the first day of its North American debut. We're extremely fortunate to have received one of the very first ICOM IC-7610 radios delivered in north America after waiting in line for many months, with my Gigaparts.com pre-release reservation.

See Video: https://www.youtube.com/watch?v=pX1fkzklETo

Croatia confirms WRC-15 60m allocation, increases 160m privileges On Friday, 24th November 2017, the Croatian Regulatory Authority for Network Industries (HAKOM) published in a Official gazette (Narodne Novine) No 116/2017, changes to the rules on amateur radio communications in the Republic of Croatia.

According to these changes, Croatian radio amateurs now have access to the WRC-15 60m amateur secondary allocation of 5351.5 – 5366.5 kHz under ITU Footnote 5.133B - i.e. with 15W EIRP.They now also have access to the 160 meter band from 1810 – 2000 kHz. 1810 –

1850 kHz Max. Power 1.5 kW; 1850 – 2000 kHz Max. Power 1 kWAccording to the Official gazette notice, these changes were to come into force 8 days following its publication, so more Croatian stations should be expected after 02.12.2017.The changes in the rules for amateur radio in the Republic of Croatia can be found on the following web address:https://narodnenovine.nn.hr/clanci/sluzbeni/2017_11_116_2690.html (Tnx: 9A2EY)

Canada's *Polar Prince WSPR* beacon will ID with a new call sign on the return leg of its voyage. With the successful completion of the Canada C3 Expedition via the Northwest Passage that culminated with the arrival of the *Polar Prince* in Victoria, British Columbia, the CG3EXP special event call sign has been retired. The *Polar Prince* will continue to carry an Ultimate 3 *WSPR* beacon as the ship returns to the East Coast via the Panama Canal, identifying as VE0EXP. The CG3EXP *WSPR* beacon transmitted on 20, 30, and 40 meters. Anyone with an HF receiver and the free WSPR application may be able to receive the VE0EXP signal and track the vessel's location on WSPRnet. -- *Thanks to* Radio Amateurs of Canada

ARISS has announced **that the MAI-75 Slow-Scan (SSTV) system on the ISS will be on the air** starting on December 5 at around 1500 UTC and continuing until December 6 at 0900 UTC, transmitting test images on 145.800 MHz FM that should be available worldwide. SSTV activity on December 7 and 8 is scheduled to occur at times when the ISS is above Moscow. In the past images have been sent in PD180 mode, with a 3-minute off time between each image. The SSTV system is in the Russian Service Module of the International Space Station (ISS). -- *Thanks to ARISS*

ARRL has announced that Maxim Memorial Station W1AW will start scheduled transmissions on 6 meters beginning on January 2. Transmissions on 50.350 MHz will become a part of W1AW's regular CW code practice, and CW, digital and phone bulletin transmission schedule, starting with the 1400 UTC fast code practice on January 2.

In addition to providing regularly scheduled transmissions on 6 meters, another goal of the W1AW transmission on the Magic Band is to act as a beacon on 6 meters, especially from the Northeast US.

Signal reports will be welcome. A web page will allow listeners to submit signal reports. Listeners also may e-mail their reports to W1AW.

Software-Defined Radio (SDR) Pioneer Vanu Gopal Bose died on November 11 after suffering a sudden pulmonary embolism. He was 52. Bose was the son of Bose Corp founder Amar G. Bose, who died 4 years ago at 83. In 1998, Vanu Bose founded Vanu Inc., which pioneered the commercialization of software-defined radio and was the first company to receive FCC certification of an SDR in 2004. Recently, Bose's company deployed more than 40 Community Connect base stations in Puerto Rico to provide cellular service in the wake of two devastating hurricanes.

What's new in N1MM Logger+: "The biggest news, which may be old news to some, is N1MM+'s embedded Spectrum Display. Whereas the basic premise for packet spots is to tell you what happened a while ago at somewhere else, panadapters tell you what it happening now on your antenna. All spectrum analyzers can show you every signal within the scanned frequencies, but N1MM+'s Spectrum Display is optimized for contest operation and allows the operator to ignore signals based on signal strength and desirability (like dupes and mults). Some contest tools - like packet spots and skimmers - automatically classify the station as operating Assisted, but you can use Spectrum Display and still qualify as a non-Assisted contester. You can find more information in the N1MM Logger+ Documentation for the Spectrum Display.

If you've been using FT8 for a while, you might want to review "FT8 Operating Tips for DXers**" (PDF)** to see if there are operating practices that also need to be updated as a result of the new software.

V-USB **is an Atmel AVR software implementation of a USB low-speed device that you can use with your own open source AVR-based products,** to potentially eliminate the requirement of a dedicated USB chip. Example drivers are included for Microsoft Windows, Mac OS X, and Linux, and the driver supports multiple types of USB endpoints. If you need more than a serial interface for that project you're building, this might help you.

Adding panadapter functionality to a transceiver that doesn't have that capability from the manufacturer is possible with the DX-Patrol Mk4 SDR Receivers, according to DX Engineering. The Mk4 is an SDR receiver capable of tuning between 100 kHz and 2.0 GHz, and is compatible with a number of open source software packages. When used as a panadapter, it can receive signals in parallel with the transceiver, or can be fed from a transceiver IF output.

Electrical Engineer Pitches In After Hurricane Hits Puerto Rico, The day after Hurricane Maria ravaged Puerto Rico, Angel Vazquez, WP3R, the telescope operator of the Arecibo Observatory -- one of the most important radio telescopes in the world -- ventured out of his home to assess the damage at work. Driving his SUV behind a backhoe through flooded towns, maneuvering past downed trees and power lines, the normally 20-minute commute took Vazquez two hours. Approaching the observatory, Vazquez said, was a beautiful thing. He had been worried that it would have been completely destroyed but the telescope was there -- it was damaged but mostly still intact. A 96-foot long antenna that helps receive and transmit signals broke off and fell onto the dish 500 feet below. And more importantly, the staff that sheltered there through the storm were all safe. But what made things very complicated was a lack of power. Reaching out to the world to let family and friends know they were safe after the Category 4 storm and that they were in desperate need for some amenities would prove difficult. But thankfully, Vazquez had a good friend at Penn State. Electrical engineering professor James Breakall, who first visited the observatory on the island in 1974 as an undergraduate student, has known Vazquez for 40 years. The two built their friendship as Breakall, whose research is in antennas, radio engineering and electromagnetics, continued to do research at observatory often, and built a second home and his own antenna on the island. “I got word from another ham radio person that he’d heard from Angel, who wanted to schedule a time to talk,” explained Breakall. Recently awarded the Radio Club of America’s (RCA) Sarnoff Citation for his significant contributions to the advancement of electronic communications, Breakall has seen first-hand the importance ham radios can have in times of emergency. This was no different. He scheduled a time to reach out to his good friend over ham radio at 6 p.m. Atlantic Standard Time, because computers, phones and any other form of communication to the U.S. was just not possible.

THANKS FOR READING. HAVE A SAFE AND HAPPY HOLIDAY SEASON!

THE RCA ARC MONTHLY NEWSLETTER IS COMPILED AND EDITED BY JIM RINEHART, K9RU AND JIM KEETH, AF9A. ALL MATERIAL CONTAINED HEREIN IS OBTAINED FROM THE SOURCES CREDITED AND EDITED FOR THIS NEWSLETTER. EMAIL TO mailto:WebMaster@w9rca.org. Check our web site at http://www.w9rca.org/